

Understanding statistics



NRL FOOTYSTATS

The Australian Bureau of Statistics (ABS) in partnership with the National Rugby League (NRL) have developed a program that uses football to improve the statistical literacy of young Australians. The NRL Footy Stats program provides a fun and interactive introduction to the world of statistics. The program involves kids participating in a range of footy activities and learning how to collect, analyse, interpret and communicate basic statistical concepts with the guidance of a facilitator.

The NRL Footy Stats Program includes a Facilitator Guide and Activity Sheets for the seven different activities.

These resources can be printed off as required.

The Facilitator Guide contains a Glossary of Statistical Terms describing the statistical concepts that underpin the seven activities.



[Facilitator Guide \(695 KB\).pdf](#)

Video

[NRL Footy Stats Program Video](#)

Activities

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[NRL Footy Stats Program Video - watch the video here!](#)



Hi, I'm Nathan Hindmarsh, retired NRL player and now NRL One Community Ambassador. When I was at school, I was lucky: I always knew what I wanted to be and with hard work and the support of those around me, I made it! I got to play in the NRL and represent my state and country. Maybe you're like me and have a dream already or maybe you're not sure yet what you want to be. It doesn't matter; we are all unique and have our own abilities and interests. Even though we are different, we do have one thing in common: we all want to achieve our dreams. What's important is learning as much as we can now to give you more choices later on.

As a rugby league player, I need to use more skills than just passing, tackling and running through gaps. I also need skills to help me understand my game, my performance and my team's performance. Like how many times I held the ball, how many tries I scored, how many tackles I made and where my team sat on the [NRL] ladder.

Learning to use numbers like these has helped me to improve my game, but understanding numbers also helps me in my life off the field. Being good with numbers and knowing what they mean is an important life skill. You probably don't notice it, but numbers are all around us. For example, numbers are used to tell us how we are going, like our life expectancy or the population of Australia. Understanding the story of numbers will give you choices in life.

Statistics, or stats, are a way of helping us understand what numbers are telling us. In footy, coaches use statistics to make better decisions about the

game, like who's better at scoring tries, who's better in defence and which teams are better than others. Statistics are really important and they are easy too, once you get the hang of them. We all learn at our own pace and in our own way. Learning doesn't always have to be in a classroom with a teacher. That's why the NRL and the Australian Bureau of Statistics have teamed up to create footy-based activities to help you understand statistics.

That's it from me for now. Have fun with the NRL Footy Stats program and remember, learning helps you to achieve your goals in life. Footy and stats make a great team – let's be part of it!

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Activity 1 Statistics! Give it a Try

In this quick introduction to data and statistics, students will watch the NRL Footy Stats introductory video and talk about how data and statistics are used in NRL and everyday life.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 1 \(7.9 MB\).pdf](#)



[Student Worksheets Activity 1 \(4.9 MB\).pdf](#)

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Activity 2 Playing Favourites

In this activity, students will conduct a simple data collection exercise (a survey) to answer the question: "What is the favourite NRL team of all the people in the group?"

They will conduct a sample survey and a class census, record their results and calculate team frequency.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 2 \(297 KB\).pdf](#)



[Student Worksheets Activity 2 \(5 MB\).pdf](#)

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Activity 3 Graph It!

In this activity, students take their recorded data (the census tally) and convert it into a column graph or bar chart. They will identify the variables (data items), label each axis, give the graph a title and find the mode.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 3 \(234 KB\).pdf](#)



[Student Worksheets Activity 3 \(2.2 MB\).pdf](#)

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Activity 4 Finding the Centres

In this activity, students will take turns kicking a football through goal markers. The number of accurate kicks (through the goals) for each student will be recorded in a tally. Students will use the data set to find the mean, mode and median, which indicate the central tendency of the data.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 4 \(295 KB\).pdf](#)



[Student Worksheets Activity 4 \(681 KB\).pdf](#)

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Activity 5 Time Series

In this activity, students will throw/pass a football at a target and look at the accuracy of their throws over 3 separate trials. Each of the 3 trials should consist of 5 throws (making 15 throws in total). Each of the 3 trials represents a point in time, and students will use their 'time series' to assess whether their performance changed over time.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 5 \(1.4 MB\).pdf](#)



[Student Worksheets Activity 5 \(2.2 MB\).pdf](#)

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Activity 6 If your class was 100 people...

In this activity, students will explore relative frequencies (percentages, proportions). Students will calculate the percentage of people in the class who support the top 5 teams (from the class census in Activity 1). Students will colour in the appropriate number of figures to visually represent the percentages they have calculated.

Download the Activity Sheet and Required Resource Sheet:



[Facilitator Instructions Activity 6 \(1.8 MB\).pdf](#)



[Student Worksheets Activity 6 \(4.9 MB\).pdf](#)

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Activity 7 Sports Reporter

In this activity, students will create a 'sports report' for print media or TV. They should use the statistical techniques covered in the previous activities to analyse the data and present a 'story' which uses data as supporting evidence.



[Facilitator Instructions Activity 7 \(2.6 MB\).pdf](#)



[Student Worksheets Activity 7 \(2.2 MB\).pdf](#)

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Acknowledgements

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